CLAIMS

What is claimed is:

1. A method of monitoring the health of a system module in a system during state transitioning, wherein the system further includes a monitor module operationally connected to the system module, the method comprising:

    -   the system module outputting a status signal for predetermined system status points during state transitioning of the system module; and

    -   the monitor module being operable to start a timer on detecting a first status signal and resetting the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period.

2. The method of claim 1, wherein the state transitioning comprises at least one of starting the system module and shutting down the system module.

3. The method of claim 1, wherein a signal is output by the system module for at least one of the following system status points, namely: at power on self test start; at power on self test end; at power on or reset; at an end of initial hardware power up, on starting booting, on ending booting, on a shutdown or panic power-off and on a system reset.

4. The method of claim 1, wherein the timer is reset on detecting each of a set of successive status signals, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a respective determined period for each of a plurality of pairs of successive status signals

5. The method of claim 1, wherein an initial period for the timer is determined to exceed an expected maximum time to a subsequent status signal assuming a healthy system module.

5   6. The method of claim 5, wherein the monitor module is operable to set the configuration of the system module, and wherein the monitor module is operable to use information about the configuration to compute a determined period to be applied for the timer.

10 7. The method of claim 5, wherein the system module is operable to inform the monitor module of a determined period to be applied for the timer.

8. The method of claim 5, wherein the system module is operable to provide the monitor module with details of the configuration of the system module, and

15   wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer.

9. The method of claim 5, wherein the monitor module is operable to interrogate the system module to determine details of the configuration of the system

20   module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer.

10. The method of claim 5, wherein the monitor module is operable to record a time for a given pair of status signals on a given initiation of the system and to

25   adapt the determined period for a subsequent system initiation.

11. The method of claim 5, wherein the monitor module is operable to record a time between a given pair of status signals on a given initiation of the system

and to employ a determined period equal to a multiple of the actual time between a given pair of status signals for a subsequent system initiation.

12.   The method of claim 1, wherein the monitor module is a service processor.

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13.   The method of claim 12, wherein the service processor is a shelf service processor for a shelf of a rack mountable blade system and at least one said system module is a processor blade receivable in the shelf.

10 14.   A computer system configured to receive a system module and comprising a monitor module operationally to be connected to the system module, wherein:
       -    the monitor module is operable to start a timer on detecting a first status signal output by a received system module at one of predetermined system status points during state transitioning of the system module; and

15   -   the monitor module is operable to reset the timer on detecting a subsequent status signal output by a received system module at another predetermined system status point during state transitioning of the system module, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined

20   period.

15.   The computer system of claim 14, wherein the state transitioning comprises at least one of starting the system module and shutting down the system module.

25 16.   The computer system of claim 14, wherein the monitor module is responsive to signals output by a received system module for at least one of the following system status points, namely: at power on self test start; at power on self test end; at power on or reset; at an end of initial hardware power up, on starting

booting, on ending booting, on a shutdown or panic power-off and on a system reset.

17. The computer system of claim 14, wherein the timer is operable to be reset on detecting each of a set of subsequent status signals, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a respective determined period for each of a plurality of pairs of successive status signals

18. The computer system of claim 14, wherein an initial period for the timer is determined to exceed an expected maximum time to a subsequent status signal assuming a healthy system module.

19. The computer system of claim 18, wherein the monitor module is operable to set the configuration of the system module, and wherein the monitor module is operable to use information about the configuration to compute a determined period to be applied for the timer.

20. The computer system of claim 18, wherein the monitor module is responsive to a system module providing a determined period to be applied for the timer.

21. The computer system of claim 18, wherein the monitor module is responsive to a system module providing details of the configuration of the system module, and wherein the monitor module is operable to use the configuration information to compute a determined period to be applied for the timer.

22. The computer system of claim 18, wherein the monitor module is operable to interrogate the system module to determine details of the configuration of the system module, and wherein the monitor module is operable to use the

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configuration information to compute a determined period to be applied for the timer.

23. The computer system of claim 18, wherein the monitor module is operable to record a time for a given pair of status signals on a given initiation of the system and to adapt the determined period for a subsequent system initiation.

24. The computer system of claim 18, wherein the monitor module is operable to record a time between a given pair of status signals on a given initiation of the system and to employ a determined period equal to a multiple of the actual time between a given pair of status signals for a subsequent system initiation.

25. The computer system of claim 14, wherein the monitor module is a service processor.

26. The computer system of claim 25, wherein the service processor is a shelf service processor for a shelf of a rack mountable computer system.

27. The computer system of claim 26, further comprising at least one said system module received in the shelf.

28. The computer system of claim 27, wherein the rack mountable computer system is a blade server system and wherein the system module is a server blade.

29. A system module for a computer system configured to receive said system module and comprising a monitor module to be operationally connected to the system module, the system module being operable to output status signals at predetermined system status points during state transitioning of the system

module, whereby the monitor module is operable to set a time on receipt of a first such status signal and to reset the timer on detecting a subsequent status signal, and whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined

5   period.

30.   The system module of claim 29, wherein the state transitioning comprises at least one of starting the system module and shutting down the system module.

10 31.   The system module of claim 29, wherein the system module is operable to output a status signal for at least one of the following system status points, namely: at power on self test start; at power on self test end; at power on or reset; at an end of initial hardware power up, on starting booting, on ending booting, on a shutdown or panic power-off and on a system reset.

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32.   The system module of claim 29, wherein the system module is operable to provide the monitor module with an indication of the determined period to be applied for the timer.

20 33.   The system module of 29, wherein the system module is a server blade for a rack mountable blade server system.

34.   A carrier medium carrying instructions for monitoring the health of a system module in a system during power transitioning, wherein a monitor module is

25   operationally connected to the system module and the system module is operable to output a status signal at predetermined system status points during at least one of starting the system module and shutting down the system module, the instructions being operable to control the monitor module:

-    to start a timer on detecting a first status signal; and

- to reset the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period.

5 35. A computer system comprising a system module and a monitor module operationally connected to the system module, wherein:

- the system module comprises means for outputting a status signal for predetermined system status points during state transitioning of the system module; and

10 - the monitor module comprises means for start a timer on detecting a first status signal and for resetting the timer on detecting a subsequent status signal, whereby the timer is operable to indicate a failed transitioning of the system module in the event that the timer is not reset within a determined period.